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DETROIT MEDICAL JOURNAL

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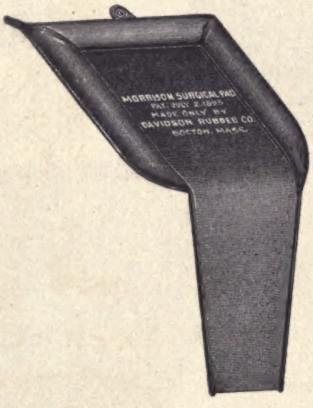

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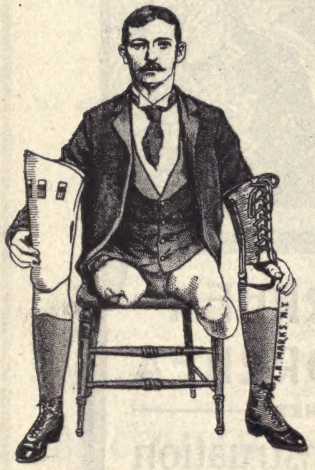

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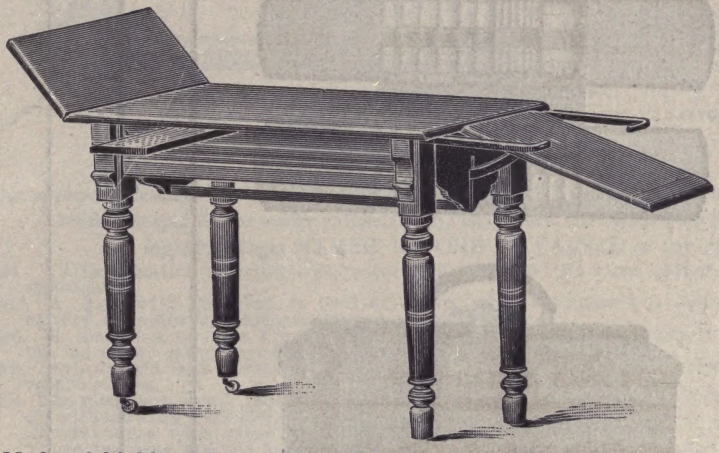

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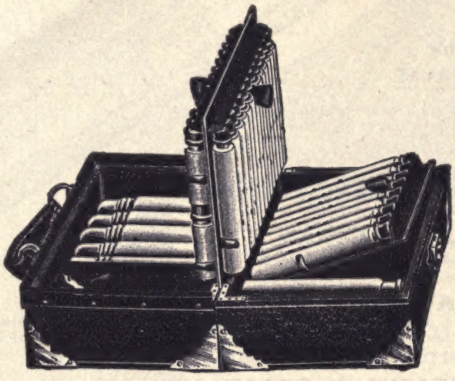

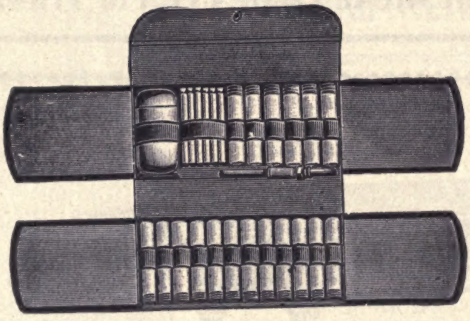

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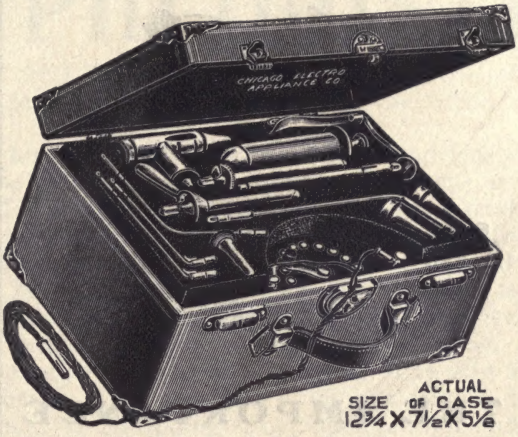

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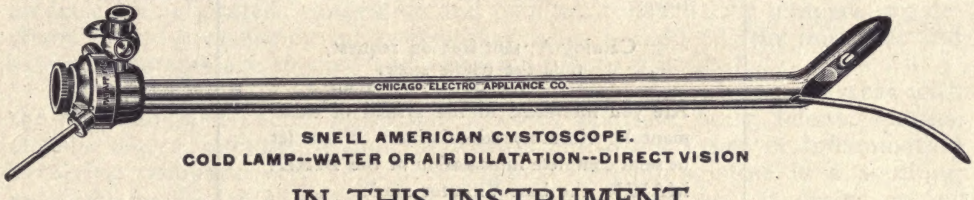

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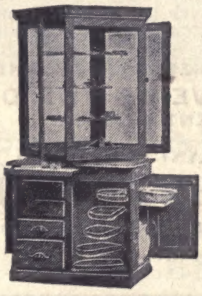

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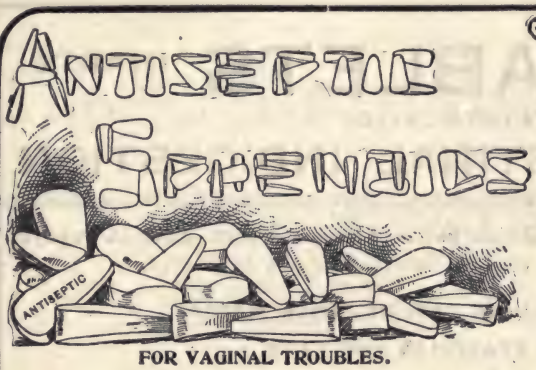

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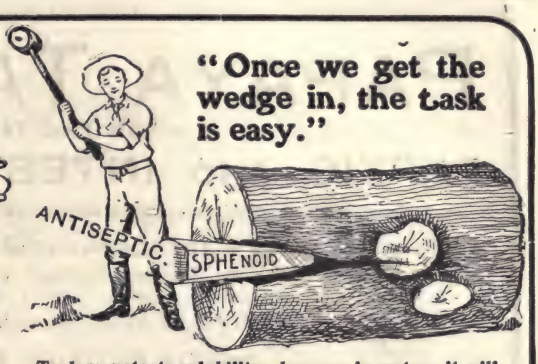

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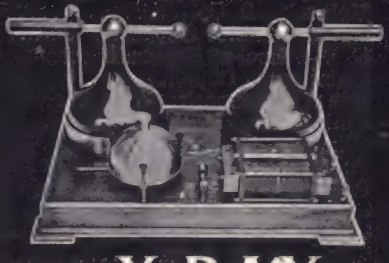

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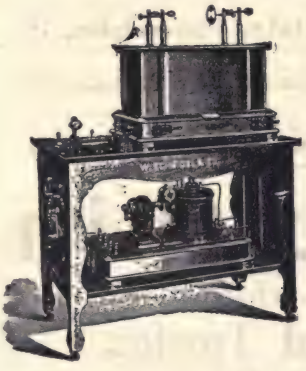

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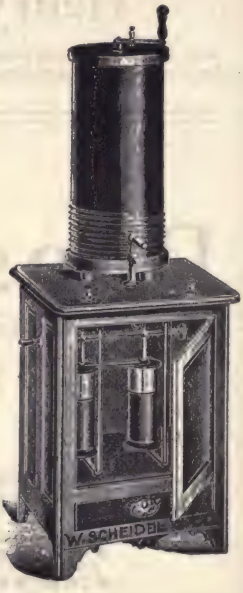

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HEADACHE.*

By J. VERNON WHITE, M. D., C. M., L. M. (Dublin).
Detroit, Mich.

For the sake of clearness I shall begin by the statement that chronic recurrent headache is reflex.

The voluminous literature on this subject is characterized by indefiniteness. This would seem pardonable when we realize how little is known of its pathology, but it is unfortunate that the limitations to our scientific knowledge should have interfered with a systematic statement of the practical information resulting from clinical investigation and experience. In order, therefore, to promote perspicuity and definiteness I venture my somewhat hazardous introductory proposition.

I have also decided to exclude from this paper the consideration of acute headaches and such as originate from intracranial disease. Accordingly, my intention is to limit the discussion to such extracranial headaches as are characterized by chronicity and persistent recurrence. The great majority of headaches which perplex the physician is to be found within these limitations.

This malady is so common that it is entirely unnecessary to give a detailed description of a typical attack, and yet the consciousness of ignorance of the subject in its entirety has lead to the adoption of a misleading terminology in the vain hope that it might form a substitute for knowledge. And so even the description of this familiar disease has been surrounded by hazy confusion.

This accounts for the introduction of such terms as Migraine, Hemicrania, Sick Headache and Cephalalgia. These terms are meant to be descriptive, but they add nothing to our knowledge but confusion, and, with the exception of Cephalalgia, they are etymologically inapplicable.

There is a pain in the head varying in intensity and in distribution. It is not always confined to one side, and accordingly is not a migraine; it is never cranial, and therefore the use of the word "hemicrania" is doubly unsuitable, nor is this pain always accompanied with gastric symptoms.

A peculiarity of this malady is that the attacks recur again and again for many years. The pain is seldom continuous. Another characteristic is that the pain is more or less remote from the seat of the disease causing it. In other words the pain is reflex. It is foreign to my present purpose to enter into any discussion about the nature of the process to which this term is applied, but it is my firm belief and contention that those headaches are not due to autointoxication or toxæmia, nor to extension of disease along the fifth nerve. They are all reflex.

In the case of ocular irritations, the at-

*Read before the Wayne County Medical society.
Detroit, Mich., June 15, 1904.

tending headache is admittedly reflex. Now what I contend is, that headache may be caused reflexly by disease in the stomach, intestines, rectum, nose, eyes, ears, and in fact in any of the important organs. I do not claim that irritations in these various organs are equally prone to produce pain in the head, but that any of these may produce such pain and that the process is practically the same in all cases; it is reflex.

I am well aware that the position I take in reference to the reflex nature of all chronic headaches is not the popular view, and is at variance with the statements of some authorities, but my observation for many years confirms me in my belief.

A noteworthy characteristic of many chronic headaches is their recurrence, or rather their intermittance. Between attacks there are days and weeks of freedom from pain. This is often the condition even in those cases in which the cause has been demonstrated to be continuous. There seems to be a condition analogous to Jacksonian epilepsy. In the case of headache the sensory nerves are affected, while in epilepsy it is the motor nerves which suffer. Sometimes the cause itself is not continuous and the cessation of the pain may be due to its tempory discontinuance. Such is the nature of headaches due to constipation; if for any reason the bowels become completely empty, as after a brisk cathartic, the headache is relieved.

Then again the cause may be a pathological lesion, which is only sufficiently irritating to provoke the head pain when in an aggravated condition.

Common examples of this class are headaches that accompany menstruation. While I do not wish to discuss the nature of the process known as reflex, I do not feel that I am justified in using the term in this connection without some explanation of the meaning attached to it. Possibly I can make myself understood better by stating what I do *not intend* to signify by this word.

I do *not* mean by "reflex," nor do I believe that nerve impressions are confined to particular tracts. It is impossible that when a head pain accompanies a retroflexed uterus, impressions pass along the nerve fibres from the uterus to the cerebral centres, and there by means of dentrites are transmitted to other neurons, which bear them to the vertex cerebri.

This is possibly what takes place, but in the absence of proof I cannot refrain from entertaining the probability of other theories. Just here I must say that, from a physiological and anatomical standpoint, it does seem passing strange that irritations in so great a variety and distribution of organs should produce pain in the head; why do they not produce aches elsewhere, or at the seat of the trouble? Why do not irritations of the stomach, rectum, heart, uterus, eye or nose each produce its quotum of pain at the exact seat of the irritation? It must be admitted that as a matter of utility for the conservation of life, it is a beneficial arrangement that disease in organs upon which the continuance of life depends, should manifest itself by intense pain, and, further, that this pain should be located in the head, so that altogether it would be so distracting that the individual would be compelled to give attention to it.

The great biologist of the nineteenth century, made free use of just such factors in demonstrating the laws of evolution.

I remember very well the impression made upon me when I first read Mr. Wallace's dissertation upon "Color" as an element in animal economy. Mr. Wallace did not explain, nor indeed has it been demonstrated, why the color of ani-

mals changes to simulate that of their environment. I do not believe it has been explained on an anatomical or a physiological basis, but it is a fact that color and other animal attributes are made to subject themselves to the advantage of the individual and species. When the herd of deer graze peacefully on the prarie, their eyes keep vigilant watch upon the antlered leader, and if by chance some distant sound or smell of enemy perturbs the air, the tail of the foremost flies up immediately, and soon every tail in the herd is standing erect. And what a conspicuous lot of tails there are, for their under surface is pure white! Now no one can question that here we have a provision of nature for this very purpose; but you cannot explain the peculiarity of coloring by physiology or anatomy; we must seek wider biological principles. It seems to me just possible that we must take the same position in order to explain headaches.

It is a biological utility that when a vital organ is attacked with disease in its incipiency, that the individual must be arrested and notified in some imperative manner. So accordingly a cutaneous burn smarts at the point of the lesion, and by the exercise of will power may be ignored, but fæces stagnated in the lower bowel have a full storm-signal, or rather danger-signal, in the form of a headache that cannot be ignored. I therefore wish to state that under the term reflex I desire to include any process such as this I have so inadequately stated, or in other words, whenever disease in an organ is the cause or occasion of pain in the head, such head pain I have classified as reflex.

One other factor must not be lost sight of and that is the tone of the general nervous system. A certain amount of local irritation in a patient with good nervous tone, may produce no headache, while the same irritation in another in whom the nerve tone is deficient may result in a decided reflex pain in the head.

The question of nerve dynamics is an important one to keep in mind when treatment is to be undertaken. I know of a case in which a patient consulted an oculist for the relief of headache, which was supposed to be due to some ocular defect. In spite of his treatment of the patient's eyes, the headache appeared to persist, and the patient decided to consult his family physician, and was completely relieved by general tonics. Not only does reflex pain often depend to some extent upon an adynamic condition of the nervous system, but just as often does the local lesion, which is directly responsible for this pain, depend upon the nervous debility.

And, accordingly, we find that both the pathological lesion and the reflex pain resist treatment until proper attention is given the general condition of the organism.

I believe this is the view expressed by Bouchard. I agree with him that it is rare that a local inflammation can extend to any degree or persist and become chronic, unless there is some general weakness of the organism as a whole. Accordingly, I believe that chronic or recurrent headache is due to a pathological lesion in some more or less remote organ, and further that there is always a derangement or deficiency in the vital dynamics of the organism.

Mr. A., age 68, capitalist, suffered with headaches daily for three years. For eight years previous he had them for weeks at a time, then they would almost disappear. He was scarcely ever entirely free from pain. This condition continued until he was forced to take narcotics every night. His stomach contents were thoroughly examined, and he had no indication of trouble from this source. Consequently his physician said there might

be a possibility of some undiscovered cause of this pain existing in his nose. He was referred to me. Upon examination I discovered in the left side an enlarged inferior turbinate, and an exostosis situated well up and back in the nasal chamber. It was pressing firmly on the inferior turbinate and the middle turbinate was thickened and rested upon the spur. There was no discharge. On the right side the inferior turbinate was normal, middle turbinate hanging free from the septum, in fact, nothing on this side to indicate any trouble. In view of the existing conditions, I informed the patient that there was enough trouble on the left side to account for the pain, consequently I cauterized the inferior turbinate and removed the apex of the spur, just enough to relieve the pressure. I applied local astringents to the middle turbinate, and in ten days the pain disappeared. He has not taken any narcotic since.

Second Case. Miss B., aged 54, school teacher, complained of headaches for 17 years. Her headache always began over the left brow, extending to the right side. If it continued it enveloped the entire head. This pain was described as being boring in character, gradually increasing in severity, until words could not describe it. It was simply a whole head of pain. This pain returned frequently. Changes in the temperature had little if any influence upon it. Her bowels were regular, in fact she had never had a day's illness in her life beyond this intense headache. She had been treated by several physicians and nothing ever gave her relief but hypodermic injections of morphine. She was referred to me for examination, although nothing pointed to any nasal trouble whatever. Upon examination I discovered a thickened inferior turbinate body, sensitive to the touch, the middle turbinate slightly enlarged, no discharge, right side normal. I cauterized this sensitive area of the inferior turbinate and applied hygroscopic and astringent medicines to the middle turbinate. The pain disappeared. It is now six months and there has been no recurrence of pain.

Conclusion.

It seems to be a characteristic of many of these patients that they are entirely unconscious of any nasal trouble. In fact it seems to be a peculiarity of chronic headache that there is complete absence of symptoms that might enlighten the sufferer as to the real nature or location of the cause. In the cases reported the patients were in ignorance of any nasal affection. The offending lesion may be such that its discovery requires more than a cursory examination by an ordinary reflected light in the hands of a general practitioner. The disease may be so located that the most skillful examination is necessary, and confirmation made by application of suitable reagents to the affected area. In other words this is a problem which generally must fall within the field of the specialist. On the other hand, from the observation of a great many cases I am confirmed in the opinion that in all patients suffering from headache, there is a general debility which requires the attention of the general practitioner, and it is his work to seek out the particular form this debility has taken, and to apply suitable treatment.

To summarize, I may state the following:

1st. Chronic or recurrent headache is reflex.

2nd. The pathological lesion is generally located in some vital or important organ.

3rd. Derangement or deficiency of vital dynamics is always present.

4th. In general debility, accompanied with local disease in a vital organ, *headache* arrests the patient's attention and enforces rest, and in this way promotes self-preservation. It is based upon a biological law analogous to the laws of evolution. Accordingly, chronic headaches require the combined attention of the general practitioner and the specialist, and I am convinced that with honest, painstaking efforts a large number of those who suffer from the terrible malady may be relieved.

623-5 Majestic building.

THE PRESENT STATE OF X-RAY THERAPEUTICS.*

By A. F. FISCHER, B. S., M. D.,
Hubbell, Mich.

When the honored Professor Röntgen announced in December, 1895, in his modest way, the discovery of an unknown or X-ray, the world paused and well it might, for it certainly has proven a most important discovery, not only upsetting the foundation hypothesis of atoms, but proving a valuable and indispensable addition to the resources of the therapeutist as well as the diagnostician.

Nature of the X-ray: The long standing and long suffering concepts of atom and molecule have been found inadequate to explain the phenomena of cathode and ultraviolet rays, so Professor Thompson, assisted by Sir George and Professor Townsend, have found an occasion to inflict on us another still smaller subdivision of matter which they christen "corpuscle." This new citizen arrives with a size the one one-thousandth diameter of an atom of hydrogen, which latter we understand Lord Kelvin has demonstrated to be one twenty-five millionth of an inch in diameter.

These corpuscles, it has been found, are discharged with tremendous velocity under the following conditions:

1. From the negative electrode in a Crookes tube producing the cathode rays.

2. From objects impinged upon by the cathode rays giving X-rays.

3. From exceedingly hot bodies such as incandescent metals.

4. From cold metals under the influence of ultraviolet rays.

5. From radio-active substances or the element radium.

These corpuscles are capable of carrying a tiny charge of negative or of positive electricity. It is a stream of these proceeding from the cathode, and impinging on a target, which causes the X-rays to emanate.

These corpuscles striking this target produce sufficient thermal effect to raise platinum to red heat, to fuse glass or char the surface of a diamond, when placed at the point of concentration.

Apparatus: It is interesting to note the variety of apparatus at present applied to the production of the X-ray, from the six plate static to the ninety-six plate static, and in coils we have varieties whose number is legion, the classifying of which would be beyond the limits of this paper.

The increasing number of devices tending to accuracy in the production of X-ray exposures, such as localizers, distortion guides, and gauges for penetration measurement, are worthy of note.

A new apparatus comes to us from Germany, the orthodiagraph, by which the outline of the heart may be traced on the skin.

*Read before the Wayne County Medical Society.

Stereo-fluoroscopy is receiving increased attention, although as yet somewhat complicated. With a successful machine, it will carry binocular vision directly into the tissues, instead of viewing only a plane shadow on a screen.

The tube-maker is adding numerous devices, intended to simplify the regulation of the vacuum; one of the simplest, and most satisfactory of these consists of a platinum wire, inserted into some convenient projection on the tube, and by heating this with an alcohol, or some other flame, for a second at a time you reduce your vacuum to the desired point.

Mechanical vacuum regulators working independently of the tube are valuable accessories and make it possible to vary the vacuum and to change polarity while the tube is in action.

We also notice variously shaped tubes adapted to cavities of the body such as the mouth, vagina and rectum.

For the protection of the worker and the patient, various shields and devices are in evidence, that show great ingenuity of design and construction; some of these coverings for the tube allow an opening for the projection of light, and others are applied to the patient covering the sound tissue.

Several eminent observers in this field seem to have come to the conclusion that in superficial cases it matters little whether static machines or coils are used, but for deep-seated work they prefer the static machine, as penetration is obtained with less integumental disturbance.

Therapeutic Application: We find in summarizing the effects of the X-ray that their claims to therapeutic action are based upon the following qualities:

(a) Causing atrophy of certain structures.

(b) Causing destruction of certain pathological tissue.

(c) Their destructive action upon organism in living tissues.

(d) Anodyne effect.

(e) Their stimulative action upon the metabolism of tissues.

(f) Causing destruction of normal tissue.

These qualities of the X-ray make possible its use in the following groups of diseases:

(a) Comedo, acne, hyperhidrosis.

(b) Carcinoma, sarcoma, tuberculosis, leukemia, pseudo leukemia.

(c) Lupus vulgaris, sycosis, acne, tinea favus, pulmonary tuberculosis.

(d) Painful, malignant and inflammatory conditions, neuralgias and itching dermatoses.

(e) Eczema, lupus erythematosus, lichen planus, psoriasis.

(f) Hypertrichosis, sycosis, favus.

Statistics: In looking over the literature available, the following cases were noted that had been reported as cured:

147 cases of Epithelioma.
43 cases of Rodent ulcer.
65 cases of Lupus vulgaris.
2 cases of Hodgkin's disease.
3 cases of Tuberculous ulcers.
1 case of Tuberculous elbow-joint.
1 case of Tuberculous knee-joint.
1 case of Tuberculous wrist-joint.
75 cases of Hypertrichosis.
4 cases of Alopecia areata.
50 cases of Acne vulgaris and comedo.
4 cases of Acne rosacea.
71 cases of Eczema.
41 cases of Psoriasis.
9 cases of Carcinoma of the breast.
1 case of Cancer of the larynx.
2 cases of Trachoma.
1 case of Sarcoma.

The above is given merely as an illustration and not as an exhaustive list.

Deductions: These are taken from current literature, and opinions of X-ray workers.

(1) The destructive action of the X-ray on cancer cells is in direct proportion to their position; the more superficial the cells, the greater the action of the ray.

(2) Rapidly growing cancers are less influenced than the more slowly growing ones.

(3) The size of a cancer determines the effect, a small cancer succumbing more readily than a large one.

(4) In operable cases the knife should have the preference for extirpation of the growth, following the operation with a course of exposures to prevent recurrence.

(5) In inoperable cases we are justified in using the X-ray, past experience giving us hope in this direction.

(6) The pain-relieving property of the X-ray stands us in good stead in many cases both operable and inoperable, besides its value in neuralgias. It has been my experience, that this effect can be prolonged for a number of days, by daily application of the static spray to the part, thus avoiding the necessity for so frequent an exposure to the X-ray.

(7) Dermatitis within certain limits is a desirable feature of the treatment, but we must be on the watch for idiosyncrasies, especially in chronic rheumatics, alcoholics and patients with faulty peripheral vascular conditions.

(8) Recurrences along scar tissue seem to be favorably affected by treatment.

(9) It is advisable to use the X-ray as a preliminary to operations when for any reason it is necessary to postpone such an operation. We have good reasons to believe that malignant growths may thus be checked in their advance and the patient be prevented from losing ground.

(10) On account of wounds treated with the X-ray healing with a small scar, it is often possible to adopt it in preference to the knife in cases in which the latter would encroach too much on necessary tissue, or produce unwarrantable disfigurement.

(11) In non-malignant diseases we have a valuable therapeutic agent in many skin diseases.

(12) In leukemia and pseudo-leukemia the X-ray has accomplished more than other medication heretofore applied.

(13) Discontinuation of treatment does not necessarily mean that the curative process has ceased, but it may act for some time after the last application.

(14) Proper systemic or general treatment of the patient is as much indicated when the patient is subjected to X-ray treatment, as at any other time.

(15) In growths of considerable size, it is well to direct the rays to the periphery, as healing commences most actively there.

Forecast: While so much has been accomplished in such a comparatively small space of time, still we look forward with anticipation, to the great possibilities in store for us in the future; in this connection, it is interesting to note the following lines of thought:

1. More thorough investigation of the physics of the X-ray and reconciliation or elimination of conflicting theories.

2. More definite knowledge of the physiological action, so we may with more certainty guard against accidents.

3. A possible filtering and combining of the X-rays so as to use only the essentials, and concentrate these for more rapid or deeper action.

4. The combining of the X-ray with Finsen and other rays in treatment.

5. The combining of X-ray treatment with physiological therapeutics.

6. The combining of X-ray treatment with drugs, which under the influence of the X-ray would give off compounds destructive to growth; for example, solu-

tions of potassium iodide give off twice as much iodine under influence of the X-ray as they do otherwise, and thus aid in impressing deep-seated cells of low resistance in such diseases as syphilis, while similarly arsenic might be of value in Hodgin's disease.

7. The combining of X-ray treatment with injections of toxins, which latter might act as partial destructants and sufficiently reduce the vitality of the growth for it to succumb to the X-ray.

8. Investigating the action of electricity or other agents on cellular life, and devising some method by which the normal cells surrounding diseased tissue may be built up so as to be practically immune from idiosyncrasies to the X-ray.

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Hubbell, Mich.

ARTERIO-SCLEROSIS AND ATHEROMA.*

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Time will not permit me to more than touch upon a few phases of this subject. The importance of the early recognition of arterio-sclerosis can not be over-estimated, for no pathologic change occurs in the human body that can compare with this in its effect upon the production of disease.

The term arterio-sclerosis has by no means a stable and generally accepted significance; it is applied to atheroma, to a generalized enarteritis, and to a fibrous thickening of the arteries. In most instances it is used to describe atheroma, which in most cases is a localized change, while true arterio-sclerosis is general. Much confusion is undoubtedly due to writers failing to recognize the difference in the changes occuring in the arteries inside and outside of the kidneys; in the former the changes are more marked in the intima and in the latter in the media. I believe with Russell, Sansom, Huchard and others, that arterio-sclerosis and atheroma are entirely different conditions.

Russell's conclusions are:

1. Atheroma and arterio-sclerosis are two totally distinct clinical and pathological entities; 2. Atheroma is a localized and patchy affection of the arteries, characterized by degenerative changes which have long been recognized; 3. Arterio-sclerosis is a generalized affection of the arteries and is characterized by (a) thickening of the tunica media, this thickening being primarily a true hypertrophy, although it may ultimately show some degeneration; (b) thickening of the tunica intima from fibrous hyperplasia of the sub-endothelial connective tissue without atheromatous degeneration; and (c) in some instances fibrous thickening of the tunica adventitia; 4. The changes in the arteries in the kidneys differ from those in the radial, or even in the renal arteries themselves before they enter the kidney. They differ in the following respects: In the kidney the thickening of the intima is proportionately greater, the media is not appreciably thickened; it may even be atrophied and may have undergone hyaline degeneration, (the atrophic changes in the kidneys being in proportion to the sclerotic changes in the vessels); 5. The lumen of the radial arteries and of the arteries in the kidneys is markedly diminished; 6. The changes in the nutrient arteries of the brain, and probably of the cord, correspond with those in the arteries inside the kidneys. 7. Arterio-sclerosis may be associated with more or less atheroma in the same subject. The uniformity of the thickening distin guishes arterio-sclerosis from atheroma, where the thickening is irregular and may present areas of calcification.

*Read before the Wayne County Medical society, February, 1904.

Russell believes one of the etiological factors in arterio-sclerosis to be what he calls "hypertonus," that is, a prolonged and oft-recurring increase of the normal contraction of the vessels, due to some irritating substance in the blood stream. This condition alters the blood-pressure and lessens the blood-containing capacity of the vessels and so diminishes the nutrition of the part. In the young and strong, blood-pressure is increased, but in the aged with feeble hearts it lessens blood-pressure and may be the precursor of heart failure. Recurring and continued hypertonus leads to hypertrophy of the muscular media of the arteries, and the circulation in the blood of deleterious substances of various kinds acting on the subendothelial connective tissue, irritating it and leading to its hyperplasia, thus making a complete picture of arterio-sclerosis.

Samson says: "While arterio-sclerosis is due to a soluble and diffuse poison, atheroma is the result of an insoluble particulate material which blocks the minute arteries of the wall of the vessel (vasa-vasorum). The local disease, atheroma, and the diffused disease, arterio-sclerosis, often concur to produce the morbid phenomena."

Oettinger considers arterio-sclerosis as the essential primitive lesson, atheroma as the secondary lesion. The generally accepted theory in this country and in Germany is that of Thoma who holds that thickening of the intrina is secondary to a dilatation of the vessel consequent on a slowing of the blood-stream; that the thickening is to compensate for the assumed widening and to restore the equilibrium, between lumen and contained blood, which had been lost. By this means, he maintains, the rapidity of the blood-flow is re-established. The vessels become tortuous; later secondary degeneration, ulceration and calcification take place. It seems to me that this dos not account for all th facts, for in arterio-sclerosis the process is not confined to the blood-vessel wall alone, but the organ or tissues participate in the form of a hyperplasia, ultimately leading to a circumscribed or diffuse fibrosis.

Most investigators agree that *atheroma* is a primary affection of the intima; degeneration and destruction of the media being secondary.

Heredity is probably a frequent and important etiological factor. The increased action of the artery is brought about by poisons entering the system, such as those from syphilis, lead, alcohol, tobacco, and the toxins of the infectious diseases. Another cause is overwork; ill-timed, ill-planned, violent, muscular exercise. Nervous excitement taxes the circulation; no doubt, many cases of disease of the arteries originate in distress, worry, anxiety, and protracted suspense —while in others the connection between nervous strain and vascular disease is indirect only. The nervous temperment often drives the subject of it to physical overwork in the form of incessant and prolonged devotion to work with insufficient hours of rest and sleep.

Auto-intoxication plays an important part; it may be due to physiological errors in primary digestion, with the absorption of toxins from the gastro-intestinal tract, or due to errors in the processes included under secondary digestion, such as retention of waste matters and imperfect katabolism.

Arterio-sclerosis is sometimes marked at an early age (cases have been reported as young as 10, 11 and 12 years), and I believe that it is quite frequent, though often overlooked in subjects ranging from 20 to 30 years of age. During the past year I examined three patients, less than 30 years of age, with marked arterio-sclerosis. Others reach an advanced age without developing it. Perhaps it would be better to say that individuals reach an advanced age because of the absence of arterio-sclerosis, for most deaths are due directly or indirectly to this degeneration. It is well marked in the negro race. Physicians are particularly liable to this condition, on account of the mental overstrain in connection with their work. There is no difficulty in recognizing arterio-sclerosis in the advanced stage, but the appreciation of beginning lesions and more especially in young individuals is by no means an easy task; if in all patients the smaller vessels were more carefully examined, however, the condition would be recognized more frequently in the young. The arteries are

indurated and their walls thickened; the induration is uniform. This uniformity distinguishes arterio-sclerosis from atheroma where the thickening is irregular and may present areas of calcification.

When arterio-sclerosis exists, in most cases the vessel fills sowly, high pressure remains for a perceptible period and the vessel empties slowly.

Among the pulse symptoms, the so-called "stability of the pulse" should be mentioned. This is shown by the fact that the number of radial pulsations remains the same in the horizontal as in the upright position. This combined with the accentuation of the second sound makes it probable that we are dealing with a case of arterio-sclerosis. Not infrequently the pulse does not correspond with the heart action, there being a number of ineffectual systoles. Care must be exercised not to confound a thickened radial with one of high tension.

An early constant sign of arterio-sclerosis, first described by Friedman, is that posteriorly the point of greatest intensity of the aortic sounds is notably lower than in health. In the normal individual the point of greatest intensity is on a level with the spine of the scapula while in one with arterio-sclerosis it is on a line running from the angle of the scapula to the seventh dorsal vertebra. When present he believes it pathognomonic.

Among the early symptoms that bring his condition to the attention of the patient are distress in the region of the heart and pain in the left arm. True angina is rare and occurs only in advanced cases of arterio-sclerosis, when the coronaries are affected or the myocardium is much involved. Not infrequently the symptoms are those of valvular heart-disease. Frequently early disturbances occur in the gastro-intestinal tract, like attacks of constipation and indigestion, intermittent in character. These are due to interference of the blood supply of the mucous membrane and the musculature of the digestive tract. We may have headache, shortness of breath, recurring bronchorrhœa, hypertrophy and dilatation of the heart, anæmia, frequent micturition, especially at night; copious pale urine of low sp. gr., slightly albuminous and occasionally a few granular casts. There is a close analogy between degeneration of the nervous system and that of the arterial system. Sclerosis of the peripheral arteries does not, of itself, permit the conclusion that the cerebral vessels are similarly affected; but if with sclerosis of the peripheral vessels we have such symptoms as headache, vertigo, mental fatigue and failing memory, then the inference is justified. In persons who have long had arterio-sclerosis without symptoms, cerebral trauma may be the starting point of marked nervous symptoms; among others traumatic hysteria. There often develops a disinclination to work. Headaches are easily brought on as the result of indulgence in tobacco and coffee. Sometimes a severe attack of neurasthenia saves a man from an arterial degeneration later on, because he is compelled to give up those things that may cause arterial degeneration.

Starr calls attention to the fact that arterio-sclerosis often simulates neurasthenia; most commonly a disturbance of mental action is first noticed, which is described by some patients as dullness or hebetude, difficulty in clear thinking, an irritability of temper and lack of control of the emotions. Others complain of temporary sensations of numbness, irregular darting pains, ringing in the ears or a sudden dimness of vision.

The condition of the vascular system has an important etiological relation to various spinal cord lesions, such as anterior poliomyelitis, bulbar paralysis and ophthalmoplegia. Although most of these cases are infectious in origin, nevertheless vascular disease has been found to be the basis of the lesion, by various investigators in the more unusual forms of the diseases.

Myelitis and combined sclerosis have also been recently found apparently secondary to vascular changes.

So far I have endeavored to confine myself to the clinical manifestations of arterio-sclerosis. Some of the same symptoms may accompany atheroma, due to the same cause, lack of nutrition to the part. True angina is usually caused by atheroma of the coronary arteries. In elderly persons so-called gas-

tralgia is often but a disguised form of angina pectoris. I have in mind a patient seen but a short time ago in which the recurring attacks of so-called gastralgia quickly ceased under the administration of nitro-glycerine and potassium iodide.

There may be no involvement of the palpable arteries, yet true stenocardia may exist. Cerebral hæmorrhage or thrombosis may be the first manifestation of atheroma. We may have headache, vertigo, loss of memory, cerebral softening, convulsions, claudication and gangrene of the extremities. Glycosuria of the aged may be due to atheroma of the arteries of the pancreas.

The Adams-Stokes syndrome in which the patient becomes somewhat comatose and the pulse may fall to 20 to 40 per minute, seems to find its best explanation in a localized degeneration of the arteries of the medulla. Butler, of Brooklyn, reported a case in which for three minutes there was no breathing and no pulse. Then there was a single heart beat; the heart beat rose to four, then to ten, then to 24 per minute. Consciousness returned after an hour. There was no hemiplegia.

The saddest aspect of arterial degeneration is that it attacks the members of a community who are the most useful and the most successful; this is particularly true of arterio-sclerosis. The condition is slowly developed and, in the meantime, the subject is often the type of health and vigor; his color is usually ruddy, walk firm, and digestion good. Sometimes, however, the subject is slightly built, pallid and nervous. These are generally the types characterized by indigestion. Early recognition alone will enable us to combat the conditions that lead to cardiac and nephritic changes. Children of parents whose arteries have degenerated ealy in life, should not be allowed to take up occupations that are especially liable to be accompied by emotional disturbances.

The utmost we can hope for in treatment is arrest of the process by removing toxic influences. Especial attention should be given to the causative factor in each case. Rest from worry and care; moderate out of door exercise; easily digested, non-stimulating diet; avoidance of alcohol, tea, coffee and tobacco, are useful.

Iodine, with its salts, is said to be the drug of arteries. It lowers blood-pressure without increasing the force of the heart; 5 to 15 grains should be given three times daily. In some cases, potassium iodide has a depressing effect; to such patients syr. hydriodic acid may be given. Alkalies and the alkaline mineral waters sometimes do good. Brunton advises: Potass. bicarb gr. xxv, potass. nitrate gr. xx, and sodium nitrite gr. ss., to be given every morning in a glass of water. It lowers arterial tension, diminishes heart activity and increases the caliber of the arteries; it also has a diuretic effect which is valuable, especially in gouty subjects.

Blue pill, followed by a saline, will be of benefit. In case of cardiac failure spartein sulphate in 1-8 grains doses and nux vomica; digitalis should not be given unless absolutely necessary, because it hastens arterial degeneration. Iron is contra-indicated; it acts as an astringent and further interferes with the circulation.

For the momentary loss of power to grasp things and a sense of pressure in the back of the head, the bromides are useful. Hot sensations in the back and head similar to the symptoms of the menopause in women are benefited by sodium iodide in small and persistent doses; nitro-glycerine gr. 1-100 t.i.d. may be given for one week of each month. Mercklen states that the serum of Trunecek does not modify sclerosis lesions, but causes certain subjective symptoms of arterio-sclerosis to disappear. He believes it to be a tonic especially applicable in asthenia and hyperexcitability, which in patients suffering from arterio-sclerosis depend on insufficient irrigation and on nutritive alteration of the nervous system.

338 Putnam Avenue.

Measles in epidemic form is reported from New York. Health Commissioner Darlngton has issued a statement declaring that from April 1 to April 25, this year, there have been 3,166 cases reported to his department. The corresponding period in 1903 showed 504 cases.

DRAINAGE OF WOUNDS AND CAVITIES.*

By FRANK BURR TIBBALS, M. D.

The inception of modern surgery as we know it today dates back but little further than the memory of many of us to the time when a general recognition of the principles of asepsis made the operation, already painless from anæsthesia, relatively safe for the patient. Today every cavity of the body is invaded by the surgeon, every organ laid bare to his healing touch. Careful clinical observation enables us to diagnose and successfully treat many hitherto obscure conditions, and few departments of science can point to more of proud progress than that which has distinguished modern aseptic surgery.

This surgical advance is by no means limited to an extension of the field of work, but is best exemplified by the improvement in technique and the conservation of all or part of organs formerly removed. The subject of drainage well illustrates this improved technique, for we now drain intelligently instead of by routine.

We have learned that all deep wounds in muscle and connective tissue should be drained for a short time to carry off the excess of lymph and blood-serum so freely poured out in the process of simple inflammation which is the first step in the healing of wounds. We have also learned that serous cavities, particularly the abdominal, are capable of taking care of an uninfected inflammatory exudate without the slightest difficulty. And these are the two cardinal principles governing the question of drainage.

It is understood, of course, that hæmostasis must be perfect and certain, otherwise, for safety, drain.

The usual materials used as drains are:

1. Glass or rubber tubing.

2. Gauze, plain or medicated, in strands or as wicking or in the form of the Mikulicz bag, or the wick covered with rubber tissue.

3. Strands of silk worm, horse-hair or catgut used in superficial wounds.

In general, superficial wounds, where pressure controls oozing, should be closed unless infected, in which case a small drain is necessary. Deep wounds usually require gauze drainage for 48 hours, or if infected, tube drainage for a longer period, it being well recognized that gauze does not constitute a reliable drain for pus.

In brain surgery, a drainage strand of gauze, horse-hair or silk worm is usually necessary to take care of the hæmorrhagic ooze, care being taken to avoid pressure upon the brain-tissue. In the pleural cavity, tubular drainage is often necessary as in empyæma and abscess of the lung, although Brinkman has recently advocated suture of the pleura to the skin of the chest-wall as a substitute for the foreign body.

Operations upon the vertebral column and about the kidney always require gauze drainage. Indeed, Goulet considers failure to drain one of the prime reasons for imperfect results in kidney fixation.

In amputation wounds and joint resections, rubber tubing is usually necessary for drainage. In operations per vaginam upon the uterus and adnexæ, drainage is usually indicated. In simple curettage, a glass or silver tube, a narrow strip of gauze, or a few silk worm strands give good drainage. In curettage following abortion, it is well to pack the uterus with medicated gauze, which checks

*Read before the Wayne County Medical society, March 7, 1904

hæmorrhage, and brings away upon removal any placental fragments left behind. If the cul-de-sac be opened, which is good surgery in pelvic inflammation, even though pus be not found, thorough gauze packing and drainage is necessary, as also in vaginal hysterectomy.

In the abdomen considerable difference of opinion has existed in the past regarding the necessity for drainage, but since due credit has been accorded the peritoneum to take care of itself if let alone, the trend is away from drainage in other than septic cases, and even in such cases men like Morris hold that good results are often obtained without it, though there will always be some cases requiring it.

Unnecessary abdominal drainage is objectionable: 1st, Because it weakens the wall and predisposes to hernia; 2nd, It makes a foreign body in the cavity which irritates the peritoneum and by inducing some shock interferes with phagocytosis; 3rd, There is grave doubt whether either tubular or capillary drainage is of much real value per se in septic peritonitis, where our main reliance must be upon the ability of the peritoneum to take care of infection aided, in my opinion, much more by irrigation than by drainage.

J. G. Clark, of Johns Hopkins Hospital, reported in 1898 a careful study of 1,700 cases of abdominal section from the standpoint of intra-peritoneal drainage, concluding that a comparitively large amount of infective material may be disposed of by the normal peritoneum, which is interfered with by drainage:

1st, By disturbing the normal currents of the peritoneum (towards the diaphragm); 2nd, By setting up an inflammatory action about the drain; 3rd, By forming an adhesive wall about the drain in a few hours which renders the absorptive power of the general peritoneum futile. Bacteriological study also showed the drains themselves to be usually contaminated at the first dressing, even when the cavity was sterile at the time of operation, demonstrating the danger of drainage as a carrier of infection. Hence Clark advocated closure of nearly all abdomens, aiding peritoneal drainage by leaving saline solution in the cavity and elevating the pelvis to facilitate the work of the diaphragm. This postural method he has now abandoned, in the belief that it aids in scattering infection through increased intestinal peristalsis.

The efficacy of unimpeded peritoneal drainage is certainly proven by the wonderful results obtained by Ochsner, Mayo and others, in septic peretonitis of appendiceal origin by simply stopping peristalsis and letting the peritoneum alone.

On the other hand, men like Joseph Price and Lewis A. Stimson advocate rather general use of drainage, even in clean cases, on the ground that even if unnecessary it does no harm, which contention seems irritational when compared with the views of Morris, who says that gauze packing may cause ileus, and obstruction by mechanical pressure, often causes an excess of reparative lymph leading to annoying adhesions and worst of all prolongs or even causes surgical shock.

Most surgeons agree upon the value of drainage in suppurative appendicitis, because the gauze packing hastens the formation of adhesions which aid in protecting the rest of the cavity. The same difference of opinion exists regarding drainage in gall-bladder work, the best practice being to drain all cases where there is sepsis or danger of oozing or leakage.

Mayo's suggestion of a secondary small opening for drainage in gall-bladder cases when necessary has the advantage

of permitting accurate closure of the long opening usually made.

In conclusion, let me summarize what in my judgment constitutes the best surgical practice:

I. In all wounds where there is likely to be much oozing or outpouring of serum, or where sepsis is present or expected, *drain.*

II In all cavities where extensive adhesions have been broken up, where leakage is feared or infection present, *drain.*

References: Brinkman, American Medicine, Feb. 13, 1904. Goulet, Journal A. M. A., Nov. 7, 1903. Morris, Medical Record, March 1, 1902. J. S. Clark, Johns Hopkins Hospital Reports, May, 1898. Joseph Price, Am. Journal of Obstetrics, November, 1903. Lewis A. Steinson, Annals of Surgery, 1896. Vol. XXII.

99 Cass Street.

The University of Pennsylvania takes a just pride in her new medical laboratories, recently completed at a cost of $700,000, and dedicated with impressive ceremonies on June 10. It is believed that the laboratories are unequaled in America in point of completeness of equipment, and their completion is another long feather in the cap of the University. The new building is located on the site of the old veterinary hall and hospital. It is two stories high, with a basement and has a front of 337 feet, with a depth of nearly 200 feet. Two demonstration rooms are provided, each seating 185 students, and two large lecture rooms are also in the building, each with a seating capacity of 400 students. By an arrangement of courts, which supplement the long frontage, abundant light has been secured, and the most modern ideas in equipment have been arranged for. When the University has finished her medical hall, her anatomical building and the auxiliary buildings which are to be erected beside the new laboratories, the institution will have one of the largest systems of buildings devoted to instruction in medicine in this country or in Europe.

An $11,000,000 hospital, the new Bellevue, to be erected on First avenue, with a frontage of two blocks from Twenty-sixth to Twenty-eighth street, will presently be an additional monument to New York's enterprise in the fight against disease. In the meantime, the old hospital is crowded continually. The new hospital will have accommodations for 2,800 patients as against 750 in the present structure. Something is needed and badly needed. There must be 150,000 hospital patients on Manhattan Island, and the constant tearing up the city for public improvements must bear its share of the blame for the conditions of illness that now prevail.

The Brown and Redwood County (Minn.) Medical Society, at a recent meeting, put on record the desire of its members to avoid newspaper notoriety by passing the following resolutions:

Resolved, That the secretary be authorized to request editors not to mention the name of any physician in connection with any case, and be it further

Resolved, That a copy of this resolution be sent to all newspapers in Brown and Redwood counties.

A bulletin issued by the State Board of Health shows that pneumonia was only one-half as prevalent in Michigan for April as the average for the past ten years. An increase was looked for, but the board suggests that much good may have been accomplished by the distribution of 11,000 pamphlets on the restriction of pneumonia, which were given out the first of the year.

DETROIT MEDICAL JOURNAL

A MONTHLY EPITOME OF PRACTICE AND THERAPEUTICS

FRANK BURR TIBBALS, M. D., Editor

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The Basic Principles of the Surgeon's Fee.

Of considerable interest to the profession, especially in Michigan, is the settlement for $2,500 without coming to trial of Dr. Wm. F. Metcalf's suit for services rendered the daughter of a wealthy Alpena lumberman.

The doctor was summoned to Alpena to see the young lady, who was very ill with peritonitis from a ruptured infected adherent dermoid cyst, operated, gave the case close personal attention for several days and saved his patient. Payment of his bill of $3,000 being refused on the ground of exhorbitancy, suit was commenced for $5,000.

In preparing for trial, Dr. Metcalf took the testimony of several noted Chicago surgeons, which is of great interest as showing the basis upon which well known specialists compute the value of their services.

The surgeons who gave their testimony were Drs. Newman, Dudley, Webster, Murphy and Ries, whose reputation and standing is unquestioned. The concensus of their opinions was to the effect that Dr. Metcalf's charge had been well within the limits of reason, and each gave his reasons for considering it to be so.

In general, the Chicago physicians stated that the specialist who voluntarily withdraws himself from general surgical work, owing to a special aptitude for work along special lines, is entitled to higher fees than the general surgeon because his concentration on practice coming within certain comparatively narrow limits gives him greater skill in that line of work, and therefore entitles him to greater renumeration. The testimony appears to point out the fact that the size of the fee is governed to some extent by the rarity of the operation, the danger from infection to the surgeon, the difficulties attending the operation, before, during and after it, and the length of time a surgeon is engaged on the case. Cases of ruptured dermoid cyst are rare, and the danger of infection is grave, owing to the widespread extent of the infectious process and the sharp spicules of bone present which may wound the fingers of the operator.

To each surgeon a hypothetical question was put, as to what he would regard as a reasonable fee for an operation similar to the one leading up to the suit, and each of the five answered according to his own estimates—concurring in the opinion that from 5,000 to $10,000 would be a reasonable charge for the services rendered by Dr. Metcalf.

Dr. Dudley, when asked upon what the charges for surgical operation are based, replied: "Primarily, there is only one logical criterion: the value of the service to the patient. Of course, there are many collateral considerations. First, the risk to the patient; the greater the risk to the patient, the greater the responsibility to the surgeon, and it is proper for anyone, whether a surgeon or not, to charge for responsibility. Second, anxiety is a thing

that one is entitled to charge for, because anxiety shortens life. Third, the fee properly varies with the skill of the surgeon, because greater skill requires greater training. Fourth, a surgeon who has a great deal to do is entitled to charge more than one who has little to do. The question then is one of supply and demand." In answer to the question, "Do you make a distinction in your charges between the rich and the poor?" he replied: "I don't charge a man more because he is rich, but less because he is poor."

Dr. J. B. Murphy's basis for charges was stated by him to be as follows: "First, on the principle that the lives of all patients are equally valuable regardless of their difficulties of the case. Second, on the degree of skill possessed by the operator, that skill lessening the danger to life, proportionate to its superiority. An able operator would have in a hundred dangerous and serious cases a mortality ranging from 3 to 5 per cent.; an average practitioner might have for the same class of work a mortality of 30 to 40 per cent. The value of the services to the individual is, therefore, estimated on the lessened risk which he takes by the superior skill. Third, operating on important, well-known and influential people with dangerous maladies increases the liability of financial loss to the operator, because a fatal result would be heralded far and wide by the press, while there would be no equal, compensating reward by the recovery, as few, if any, would learn of it, and in the notices and reports of the death of these people, there is no statement made to relieve the doctor of the responsibility by emphasizing, stating, or mentioning the hazardous condition which were present that necessitated the operation. Fourth, the time involved in the operation and treatment." Continuing, he made the following statement: "When I go out of the city I make an additional charge for the responsibility of travel, as my capital invested is all in my person, and any accident to me destroys the creative power of my capital."

In the opinion of Dr. Emil Ries, charges should be based: "First of all, on the character of the service rendered. Secondly, on the value of the service to the patient. Thirdly, on the amount of work the surgeon is doing; that is to say, his reputation and standing."

When the case was begun in the Wayne Circuit court, it naturally attracted close attention from prominent physicians and surgeons all over the state, who would doubtless have been glad to get a ruling on so important a matter which touched them so nearly.

It is a difficult matter for any surgeon to have a wholly definite method of computation of his fee in a given surgical case; but it is probable that the opinions quoted include in a general way the ideas of all surgeons, from whose standpoint it is taken for granted that a man will willingly make any financial sacrifice to save the life of himself or of one of his family. The general feeling against large surgical fees is ascribable to the fact that there are surgeons willing to operate even for the wealthy for comparatively small sums; but the view that an expert is entitled to expert's pay is apparently borne out by the testimony secured from the Chicago surgeons and from the verbally expressed opinion of many others. How far these opinions would go in determining a jury to award the full amount asked for by a complainant surgeon is, of course, merely a question of conjecture, and it would certainly be an excellent thing if some case similar in character to the one just settled could be taken through the courts, with a view to getting a definite ruling.

We decry commercialism in medicine and yet would be glad to see the view generally accepted that medical services which relieve suffering and prolong or save life, are proportionately at least, as valuable to the man able to pay, as the twists and evasions of legal lore, where money only is involved.

The State Meeting.

The second annual meeting since the reorganization of the Michigan State Medical Society was held on May 25 to 27 at Grand Rapids, with the largest out of town attendance the society has ever had.

The meeting was well managed, many good papers were read and discussed, and in general good feeling and harmony prevailed. All routine business was transacted promptly by the House of Delegates and the social side of the medical man well catered to. The board of councilors reported a total membership of 1,750, a net gain of 25, with a good cash balance in the treasury.

Dr. B. D. Harison, secretary of the Michigan State Board of Registration, reported in detail the working of the Nottingham medical act, pointing out some difficulties in enforcement of the full text of the law, which in requirement of preliminary education and medical knowledge exacts the highest standard in the country. Reciprocity, complete or partial, has been established with ten states.

The first trial of a three-day meeting was not an unqualified success, the attendance on the last day being very small. However, we do not think the plan should be abandoned without further trial. Certainly with nearly 2,000 members a three-day meeting is needed to give time for all who desire to read papers and a little consideration will doubtless make this clear. Possibly the holding of some of the best material until the last day will strengthen the plan until it becomes well established.

One or two important matters came up at the meeting, of which we shall speak more at length in our next issue. The officers chosen for the ensuing year are exceedingly well fitted for their positions and we predict a very successful meeting at Petoskey, the last week in June, 1905.

The officers-elect are as follows: President, Beverly D. Harison, Sault Ste. Marie; 1st vice-president, Don M. Campbell, Detroit; 2nd vice-president, Wm. M. Edwards, Kalamazoo; 3rd vice-president, Richard R. Smith, Grand Rapids; 4th vice-president, John W. Moore, Atlantic Mine.

The American Pediatric Society.

The American Pediatric Society held its sixteenth annual meeting in Detroit May 30-June 1, with twenty-five or thirty members present. Many noted men, especially from the east, were in attendance and the local profession ably assisted Dr. C. G. Jennings, the only Michigan member, in maintaining Detroit's well established reputation for medical hospitality. The papers read, while mainly technical, appeared to interest the specialists who heard and discussed them, and the ordinary doctor who tiptoed into the august presence speedily learned that the great names which he had reverenced on the back of his text-books belong to a bunch of jolly good fellows.

A feature of the meeting of local interest was the dinner tendered the society by the Wayne County Medical Society, at which one hundred or more were present. Immediately following the dinner there was a special meeting of the Wayne County Medical Society, the program for the evening being as follows:

Symposium on Infant Feeding.

1. The Influence of Breast Feeding on the Infant's Development, Dr. Henry Dwight Chapin, New York.

2. Cow's Milk for Infant Feeding, Dr. Augustus Caille, New York.

3. The Milk Laboratory, Dr. John Lovett Morse, Boston.

4. Substitute Feeding During the First Year, Dr. Thos. Morgan Rotch, Boston.

5. Feeding in Difficult Cases During the First Year, Dr. L. Emmet Holt, New York.

At the annual meeting of the society, Dr. C. G. Jennings, of Detroit, was elected president; Dr. C. G. Kerley, of New York, vice-president; Dr. F. S. Adams, Washington, secretary; and Dr. J. P. West, Bellaire, O., treasurer. The next convention is to be held at Lake George, N. Y., June 19, 20 and 21, 1905.

Detroit a Medical Centre.

Detroit appears to be entitled to some fame as a medical centre. While devoid of the multiplication of medical energy of some American cities wnere nearly every physician is a "Professor," we are doing the best we can with only three schools. To these must now be added the Detroit Post-Graduate School, which announces as its staff a number of the brightest young men in the city, who are prepared to prescribe a "spring tonic" for the profession in the form of a three weeks' course of instruction in the newer diagnostic and remedial methods.

The annual clinics of the Detroit and the Michigan Colleges of Medicine last month were well attended, the combination of gastronomic, social and mental stunts provided seeming to appeal to the country practitioner as a desirable relaxation after an exacting winter's work.

EDITORIAL NOTES.

According to the *Lancet*, the following method of extracting radium is the one generally followed: Operations are begun by crushing and pulverizing pitchblende and roasting the powder with carbonate of soda. After washing, the residue is treated with dilute sulphuric acid; then the sulphates are converted into carbonates by boiling with strong carbonate of soda. The residue contains radium sulphate, which is an exceedingly insoluble salt. The soluble sulphates are washed out, and the residue or insoluble portion is easily acted upon by hydrochloric acid, which takes out, among other things, polonium and actinium.

Radium sulphate remains unattacked, associated with some barium sulphate. The sulphates are then converted into carbonates by treatment with a strong boiling solution of carbonate of soda. The carbonates of barium and radium are next dissolved in hydrochloric acid and precipitated again as sulphates by means of sulphuric acid.

The sulphates are further purified, and ultimately converted into chlorides, until about 15 pounds of barium and radium chloride are obtained by acting upon one ton of crushed pitchblende. Only a small fraction of this mixed chloride is pure radium chloride, which is finally separated from barium chloride by chrystalization, the crystals from the most radioactive of the solution being selected. In this way the crystals ultimately obtained are relatively pure radium chloride of a very high degree of radioactivity.

The Journal of Tropic Medicine, reports through Dr. J. C. Thomson, of Hong Kong, some interesting facts in connection with the treatment of the plague with large doses of carbolic acid. Dr.

Thomson administered 144 grains of carbolic acid daily, divided into two-hour doses of twelve grains each, in a mixture flavored with syrup of orange and chloroform water, in some cases extending the treatment over long periods. In the case of an inspector, named Knight, he says: "Inspector Knight, for instance, consumed over 2, 500 grains of pure carbolic acid before his blood was free from plague bacilli." Dr. Thomas reports that carbolic acid poisoning was practically unknown, in spite of these heroic doses, and that carboluria appeared in only a few cases. The omission of one or two doses was then sufficient to clear the urine, when treatment was resumed; in cases in which dyspepsia developed, greater dilution of the acid was all that was required to overcome this condition. Dr. Thomson closes his remarks as follows: "As a result of observation of its use in a series of 143 cases, I consider carbolic acid in large doses the most hopeful means of treating plague thus far at our disposal in Hong Kong."

A notable feature of the Grand Rapids meeting was the address on appendicitis by Dr. A. J. Ochsner, of Chicago, who reported 1,000 consecutive cases, operated at one hospital during the 33 months preceding May 1st, with a mortality of 2.2 per cent. The discussion showed that the surgeons of the whole country are accepting the fundamental truth of Ochsner's contention that the time to operate is not when the case is first seen, but either early while the infection is confined to the appendix, or late, after the acute attack has subsided.

Certainly a record of but 22 deaths in a thousand cases of appendicitis, all operated except a few moribund when admitted, challenges the admiration of the surgical world and attracts thoughtful attention to the principles to which such a record are ascribed.

State Health Commissioner Lewis, of New York, in his recent report to the governor of the state, has undertaken to point out the monetary loss to the state in the deaths resulting from preventable diseases. The report reads in part: "If the monetary value of a human life is assumed to be $5,000, the deaths from but five preventable diseases during 1903 in this state represent a loss of $94,960,000. These figures seem appalling, and yet millions upon millions can properly be added to this sum in loss of wages, expense of the care of the sick and many other expenses incidental to the management of these epidemics and infectious diseases."

Commissioner Lewis goes on to show that vast opportunity and abundant authority was at hand to meet conditions, but he claims that the appropriations to carry on the work were miserably inadaquate. He estimates that a million dollars a year could be used with immense advantage to the state. As a striking instance of conditions he mentions the fact that in the course of the typhoid epidemic at Ithaca there were 500 cases reported, and fifty deaths. The distribution of the cases showed that impure water was responsible. Sufficient funds should have been provided to remedy this distressing condition.

A resolution was before the Canadian house of commons March 23, to prohibit the manufacture, importation and sale of cigarettes, which elicited a long, if not profitable discussion. Last year a similar resolution was carried on a vote of 103 to 48, but owing to some irregularity was subsequently ruled out. The sponsor of the measure this year quoted Sir William Hingston, Montreal, and Dr. Charles

Sheard, Toronto, as representatives of the medical profession who had pointed out the dangers and evils of cigarette smoking. The resolution was opposed by both the prime minister, Sir Wilfrid Laurier and Mr. R. L. Borden, the leader of the opposition. No vote was taken thereon, and the subject is shelved for the present session.

At the election of the Wayne County Medical Society on May 19, the following corps of officers for the ensuing year was chosen:

Guy L. Kiefer, President.

W. S. Anderson, Vice-president.

W. J. Stapleton, Jr., Secretary-Treasurer.

Directors—J. Flintermann, H. W. Longyear, F. W. Mann, W. F. Metcalf, F. B. Tibbals.

Section of Progressive Medicine:
Chairman, E. S. Sherrill.
Secretary, H. E. Safford.

Section of Surgery:
Chairman, J. N. Bell.
Secretary, B. R. Schenck.

A largely attended meeting of trained nurses from all over Michigan was held in Detroit last month for the purpose of organizing a state association and securing legislation to make state registration of nurses compulsory, following the example of New York, New Jersey, Virginia, Maryland and other states. By this means it is expected to give well trained nurses a recognized standing similar to registered physicians and to aid people to discriminate between the graduate and the partly trained or untrained nurse. Mrs. L. E. Gretter, of the Farrand Taining School, was elected president.

Dr. J. R. Eastman, an Indiana physician, is reported in the *Medical World* as having a simple and satisfactory method for aborting a felon. The treatment consists of the local application of alcohol under perfect air-exclusion. Cotton, thoroughly saturated with alcohol, is placed on the affected part, and a thin rubber finger-stall applied over all. Seventy-two hours usually suffices to give relief, and even effect a cure. Dr. Eastman learned this in Von Bergmann's polyclinic in 1897, since which time he says that he has not had occasion to lance a single felon the treatment of which was begun in time by this method.

Dr. Doyen, of Paris, recently read a paper before the Academy of Medicine of Paris, announcing the results of his experiments with serum injections for the treatment of cancer. The serum was prepared from the micrococcus neoformans and of 126 cases treated for a period of two years, 58 showed no improvement, 47 improved in varying degrees, and 21 are regarded as cured. Dr. Doyen believes that his method will prove efficacious in many cases, if it is begun early enough and is applied with perseverance. It is not applicable, however, where the cancerous process has attacked the viscera or the ganglions.

A new casein product is know as "galalith" or milk-stone, which is manufactured in Germany into articles having the appearance of horn, ebony or marble. It is manufactured by rendering the casein insoluble by the use of acetate of lead or other metallic salts, freeing from water, drying and finally the addition of formaldehyde. The inventor believes that it will be a useful substitute for celluloid, as it ignites less easily, is odorless and absorbs only a small percentage of water.

Work on the proposed Iroquois Memorial Association is going steadily forward, and the men at the head of the movement have incorporated a body under the name of the Iroquois Memorial Emergency Hospital, with offices in the Calumet building. The officers and directors elected are: R. T. Crane, Jr., president; Charles Dickinson, vice-president; Frederick W. Crosby, treasurer; A. A. Sprague, 2d., secretary; Dr. Emil G. Hirsch.

Ottawa, Ont., is suffering from an epidemic of enteritis, said to have been caused by impure water. The condition of the water is ascribed by the authorities to the fact that a number of impurities collected during the past severe winter have been taken into the water with the spring thaw. The neighboring city of Hull, which has the same water supply as Ottawa, has also been suffering to some extent.

In the first twenty-three days of April, just past, 403 deaths from pneumonia were reported by the Chicago Health Department. These figures show a daily average of 22.1, as against a daily average for April in fourteen preceeding years of 12.4. Deaths from pneumonia were 78 per cent. higher than usual, the malady doing fearful execution among the aged. Twenty-four per cent. of the deaths occurred among those over 60 years of age.

Montreal, Que., has passed a law requiring physicians, or other qualified persons, to report to the Board of Health all births in the city within eight days from their occurrence. Special provision is made for the registration of foundlings, and a penalty for false information in regard to births has been fixed, not to exceed $40, or imprisonment for two months. The law has been given immediate force.

The Wayne County Medical Society Mily Commission has recommended that the society shall issue two certificates: (1) That the milk examined is guaranteed to contain less than 10,000 germs per cubic centimeter and does not contain less than 3.75 per cent butter fat. (2) That the milk examined contains less than 50,000 germs per cubic centimeter and does not contain less than 3½ per cent butter fat.

Dr. Eduardo Maragliano, of Genoa, head of the University of Italy, in a communication to an assemblage of Philadelphia physicians, announces his belief that he has discovered a certain prophylactic treatment against tuberculosis, and one that will prove of great benefit in the early stages of the malady. He has produced what he holds to be a specific therapy for tuberculosis and bases his conclusions on clinical laboratory work covering a period of thirty-four years.

What is believed to be the specific cause of mumps has been isolated by Dr. Samuel Darling, resident pathologist of the city hospital, Baltimore, Md. Working with Dr. William R. Stokes, professor of pathology at the College of Physicians and Surgeons, Dr. Darling has demonstrated the presence of a diplococcus which, in the opinion of a number of Baltimore physicians, may be regarded as the germ of mumps.

The Illinois Medical Society will proceed to collect $10,000 as a nucleus for its war fund in the fight against tuberculosis.

The Wayne County Medical Society has abandoned its separate sections, because of the extra expense involved, and has adopted the plan of the Cleveland Academy of Medicine of weekly meeting, maintaining two sections in place of two of the general meetings. This change systematizes the program so that the second meeting of the month shall be devoted to Internal or Progressive medicine and the fourth meeting to Surgery of all types.

Maryland physicians have asked the Ways and Means committee of the state legislature for the sum of $50,000 to be used in the erection of a fire-proof building to be used as a place of safety for the library of the Medical and Chirurgical faculty. The original intention was to ask for $100,000 for this purpose, but in view of the extraordinary expenditures the legislature will naturally be called upon to make as a result of the Baltimore fire, the amount was cut in two.

The Postmaster-General of Canada has determined to put a stop to the circulation through the Canadian mails of all magazines, books or publications of any kind containing anything of a libelous, immoral or indecent nature.

He has also excluded from the mails a magazine called Physical Culture, because of a libelous attack upon five Toronto physicians published in the October number.

The Lexington, Ky., Medical society has appointed a press committee to instruct the public through the medium of the press in the laws of hygeine and sanitation. This committee has instructions to prepare papers along practical lines, to be read before the society, which if approved will be given to the lay press for publication.

Dr. Myron H. Andrews, a medical practitioner in Detroit since 1865, died at his residence, 11 Elizabeth street west, on June 3, aged 88. Pneumonia was the immediate cause of his death, his advanced age not providing him with sufficient strength to recuperate from the attack. He was a native of Greenville, N. Y., and studied medicine at the Geneva University, taking his degree from the Buffalo Medical College in 1846. Two years' practice was spent in Bellevue, Mich., and eleven years in Hillsdale and Niles, after which he came to Detroit. He left active practice three years ago. Dr. Andrews was at one time city physician of Detroit and for a number of years he was a surgeon for the Michigan Central railroad.

Dr. Ralph N. Isham, of Chicago, died at Lake Forest, May 28, aged seventy-three. Cancer of the stomach was the cause of his death. Dr. Isham was born at Manheim, Herkimer Co., N. Y., in 1831, and took his degree from Bellevue Hospital Medical College in 1845. The next year he came to Chicago, where he has been prominently known ever since. In 1859 he joined in the formation of a medical department of Lind University, now known as Northwestern University Medical School, where he held the chair of surgical anatomy and operative surgery. In the civil war he served as a member of the Sanitary Commission, and was at the battle of Shiloh in the field. He also had charge of the Marine Hospital at Chicago for a time.

A committee, headed by John B. Murphy, M. D., of Chicago, has been appointed by the Chicago citizens who want a "sane Fourth of July" this year. The plan is an eminently practical and sensible one. While pleading for a more ra-

tional Fourth, the pleaders provide a special staff to look after the injuries of those who are injured, as some are sure to be, in the old-fashioned and noisy celebration. The committee appointed will prepare an address to the school children, suggesting the best means for treatment of Fourth of July casualties.

V. E. Henderson's article in the January *Canadian Practitioner and Review*, in which Dr. Henderson takes up the work done by Dr. Dunbar along the line of investigation of the etiology of hay fever, is summed up as follows in the *Journal of Eye, Ear, Nose and Throat Diseases*:

I. The effect is not a psychical one, nor due to mechanical irritation, for pollen with smooth coats produces the disease as rapidly as that with the rough coats, nor is it due to a volatile oil.

II. That pollen of grasses acts as a specific cause and that of plants gives comparatively negative results.

III. That rupture of coats of pollen grains usually occurred when in contact with moist mucous membrane or tears, and had to take place before irritant was set free.

IV. That it is due to a toxin or toxic body, this toxin being present in, or perhaps the body itself, short bacillus-like rods which give a starch reaction with sodine—known as anagloid rods.

V. That effect was produced by process of general poisoning.

VI. That an antitoxic serum can be satisfactorily produced to neutralize the toxic body production of hay fever; further, since there are objectionable features to the use of serum, Dr. Dunbar has succeeded in producing it in form of powder to be snuffed up the nostrils and placed in the conjunctival sac.

Assistant Surgeon Claude R. Pierce, representative of the Public Health and Marine Hospital service at the City of Panama, has been appointed health officer of that city by the Panaman authorities. This is an important step in the matter of concessions to America, since his appointment will doubtless result in the adoption of American methods for the prevention of infection from the outside in the canal zone. In view of the danger from South America ports, this is an extremely important matter.

Dr. Knopf, in the New York Medical Journal, says that sweeping the streets in a dry state should be considered a crime. Perfectly true, with the added statement that it is a crime, and has been shown to be. A party of New York white wings is even now undergoing treatment for tuberculosis, contracted by the discharge of their duties. If these men die, someone is guilty of their death.

More vital statistics on the money cost of consumption are constantly being reported. At a recent meeting of the Illinois Medical Society at Bloomington, Ill., Dr. Homer M. Thomas estimated the total annual loss to Illinois from 7,026 deaths at $36,531,000. It is estimated that 300,000 people living in the state at the present time are sufferers from the disease.

At Copenhagen, Denmark, where the international tuberculosis congress was recently in session, action was taken favoring the study of hygiene in schools and colleges, the collection of statistics concerning consumption and the adoption of laws to prevent spitting in public places.

Prof. Dr. Albert Hoffa, of Berlin, a distinguished German surgeon, has recently been a visitor at some of the medical institutions in the east where he has been conducting orthopedic clinics. His writings on his specialty are well known by the profession, and he has done much to perfect the technique in the open method for correction of congenital dislocation of the hip. While he was in Maryland, at the University hospital in Baltimore, he took occasion to compliment American surgeons on the reputation which they bear abroad, for the perfection of their technique in operation.

Dr. Charles A. Oliver, of Philadelphia, has been chosen by the British Medical Association as its official guest from the United States at its seventy-second annual meeting, which is to be held in Oxford, England, in July. With him are associated Prof. Hirschberg, of Berlin, representing Germany, and Dr. Javal, of Paris, representing the French republic. During his stay Dr. Oliver will reside at Keble College as the guest of Mr. Robert Walter Doyne, president of the ophthalmological section of the B. M. A., and lecturer on ophthalmology at Oxford.

The National Pure Food and Drug Bill, commented upon in our last issue, has been laid over until the next session of Congress. During the interim it is hoped that each physician will interest himself in this needed legislation and write the senators of his state urging their support for the bill when it comes up again.

Drs. C. D. Aaron, A. W. Ives, Florence Huson and H. R. Varney, of Detroit, visit Europe this summer for the usual combination of medical study and pleasure, the exact proportion of the two principal ingredients in this prescription not being stated.

In the case of Hurley vs. Eddingfield (Ind.), 53 L. R. A. 135, it is held that a state license to practice medicine bestowed upon a physician imposes no obligation to respond to every call, so as to render him liable for arbitrarily refusing to attend a sick person, although no other physician is procurable.

Chicago's mortality record for May is lower than that of any corresponding period since the establishment of the health board's statistical bureau. In the four weeks ending May 28 there were 1,990 deaths, a rate of 13.44 in the thousand.

Pneumonia counted 100 more deaths to its discredit in Indiana last February than in the same month of the previous year. There were 1,251 fatal cases in January and February.

The Detroit and the Michigan College of Medicine, of this city, added nearly a hundred physicians to the medical population of the country at their May graduating exercises.

United States Consul-General Holloway, stationed at Halifax, N. S., has reported the discovery of radium-bearing minerals in the province of Quebec.

The Michigan College of Medicine is planning to erect a new college building for laboratory and teaching purposes.

Dr. Wm. Applebee, of Detroit, was married on April 27 to Miss Gertrude Luke, of Toronto.

NEW INSTRUMENTS AND DEVICES.

Mention of new instruments and devices in this department is entirely complimentary and articles illustrated are judged on their merits.

We invite manufacturers and physicians to send us matter suitable for publication under this head. A description of the device and an electrotype or half-tone with a base not greater than two and five-eighths inches should be sent.

Always mention the price of the article in question.

The management cannot undertake to return cuts unless postage for same accompanies the letter with which they are sent.

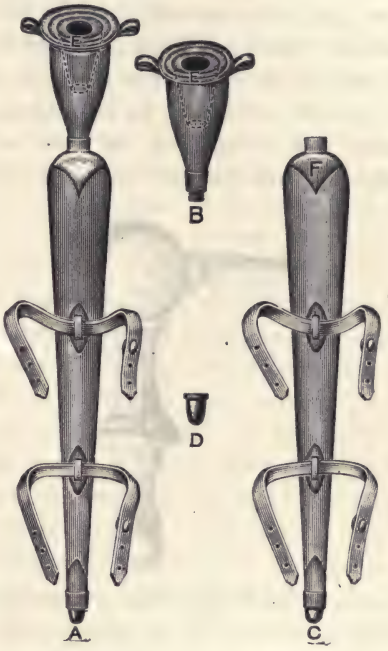
Operating Head Cap.

An excellent device for confining the hair of the patient while an operation is in progress. There can be no slipping when this cap is in position, and it may be used to cover the entire head or only

a part of it, as the surgeon desires. The illustrations show the cap in several positions; it is made of the best quality of rubber, and retails for $1.25. The cut also shows the trephining cap, which is made the same as the one first mentioned, except that there is a three-inch hole in its center. Any sized hole may be ordered, and the trephining cap retails for $1.50.

Perfection Urinal.

The name of this device has been selected by the manufacturers because they believe that they have produced as perfect a thing of the kind as can be made.



It is intended for day or night use, and in its different forms admirably serves the purpose. Figure A shows the urinal as a whole, as it is to be worn at night, and Figure B the sheath which is intended to be worn in the day-time. The construction of the latter is such that it may be drawn to one side when the wearer desires to pass water into a vessel, and readily replaced afterward. The small cap shown at D is fitted both to the end of the night urinal and to the one worn by day.

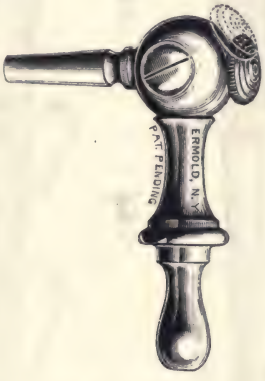
Important features of the device are the valve at F, which prevents the urine

from flowing back into the sheath when it has once been passed into the receiver, and the tube at E, which is designed to prevent leakage over the top of the urinal. The receptacle is readily emptied by day or by night by unscrewing the cap, D, and releasing the contents.

The urinal is well made, of the best material, and retails for $2.50.

New Cut-Off.

This handy device will prove a boon to physicians who have been annoyed by the faulty action of the valves and springs in their cut-offs attached to nebulizing apparatus. Its simplicity is one of its strongest recommendations, and its con-



struction is such that there is nothing to get out of order. It is strong and compact, does the work well and has everything to recommend it. One hand controls it perfectly, and there are no springs to keep in condition. Neither are there valves to leak. Moving the thumb-rest regulates the supply of air admitted to the tube, and the amount may be kept under perfect control.

The cut-off is manufactured of the best material and its finish is excellent. Its retail price is $1.00.

Eye and Ear Douches.

These devices are designed by Dr. Sayer Hasbrouck, of Providence, R. I., and present many advantages. The eye douche is a combination of a glass cup and a soft rubber tip. The latter has flexible wire moulded in its free end, and this fact permits it to be shaped quickly

to the orbit. When a fountain syringe is attached to the glass cup, the eye may readily be irrigated with any desired solution. The overflow tube shown should be kept on top of the douche when it is being used, and provides for drainage without wetting the patient. When it is desired to practice ocular massage after the manner suggested by Kauffman, the overflow tube should be below the douche, when, by compressing and releasing it while the solution is flowing into the orbit, pressure and suction may be obtained alternately. The patient himself may, with practice, successfully flush the lachrymal sac and canal.

The ear douche is similar in idea, and may be used either by the physician or

the patient. Warm, normal salt solution gives the best results, and the pressure of the solution may be regulated by raising the bag of the fountain syringe care-

fully. By this means sufficient force may in many cases be generated to evacuate the secretion in the middle ear through the eustachian tube, relieving pain from pressure.

The eye douche retails for 75 cents and the ear douche for 60 cents.

Nasal Scissors.

This instrument, devised by Dr. Joseph Foster, of Lansing, Mich., offers a number of advantages to the operator on the turbinate bodies, and is an excellent instrument for general work on the nose.

The blades are long and narrow, as shown, but are abundantly strong for good work, and are extremely easy of introduction. The manner in which the handles are bent provides for keeping the hand of the operator out of the field of vision, an important consideration.

Operations on the lateral walls of the nose are readily performed, and owing to the instrument's shape, operations on either side of the organ are equally easy. The scissors are simple of introduction when turbinectomy is decided upon, and they possess many advantages in septum work.

The scissors are seven inches in length, and retail for $4.00 a pair.

Germany is beginning to feel more strongly than ever that she has too many physicians. There are nearly 30,000 in the empire at present, double the number in 1876. This happens in the face of discouraging statistics regarding the cost of attaining the requisite medical education and establishing a fair practice. This is given at figures ranging between $5,950 and $7,140, yet forty-six per cent. of the German physicians receive less than $714 a year, and twenty-seven per cent, of them but $214. With a view to relieving the congestion of the profession, the German Association of Physicians has asked German consuls all over the world to look out for positions for young doctors abroad. It is difficult to see how this plan is going to meet with success. No country appears to be suffering from a want of physicians, even from the excellent German schools, and Germany will find unlimited difficulty in dumping the surplus. Evolution will no doubt finally arrange it so that only a man fitted by ambition and aptitude will ever enter the study of medicine; there are many with ambition, comparatively few with aptitude. Eventually the young man will recognize the fact that medicine is not the royal road to wealth and he will seek less dignified but more lucrative paths. Then the number of competent physicians will be more nearly in proportion to the population and the demand.

Sir Henry Thompson, the distinguished London surgeon, died at London, England, April 18, last. He was eighty-four years old.

PROGRESS OF MEDICAL SCIENCE

Hernia in the Young.

De Garmo (*Med. Record*, February 13, 1904), says that the most important predisposing cause is defective development, owing to imperfect descent of the testicle, with the consequent lack of obliteration of the canal of Nuck, which allows protrusion of some of the abdominal viscera into the cavity of the tunica vaginalis, and hernia is thus established.

Of the direct exciting causes of hernia in children, constipation, with resulting increase of tension on the abdominal wall, is of great importance. Whooping-cough, bronchitis, excessive crying and tight belly-bands are other causes.

In 2,000 cases of hernia in the author's clinic, 985 occurred in children under fourteen. The forms met with in childhood are, in the order of their frequency, inguinal, umbilical, ventral and femoral.

The symptoms of hernia in early life are similar to those seen in adult life with pain and gastro-intestinal disturbances more common.

Treatment, by the application of a suitable truss, should be begun as soon as the hernia is discovered, and will cure most cases.

Strangulated hernia in infancy may often be reduced by proper manipulation under anæsthesia, although it has been successfully operated at a very early age and is certainly not as dangerous as in later life.

The probable points of constriction in a strangulated hernia in infancy are limited to two. At the external abdominal ring, the contriction being by the fibrous tissue which abounds in that region, or in one of the white, fibrous rings or bands in the sacs themselves. These bands, two or three times the thickness of the rest of the sac, very tough and inelastic, found at any part of the sac, are most common in childhood, but may be found in adult life.

In operating for strangulated hernia in children such a closure of the parts should be made that a permanent cure may be effected. De Garmo believes that the prejudice against operation is rapidly disappearing, now it has been shown to be both safe and successful, although it is not forgotten that 90 per cent of children under three years can be cured by mechanical means and proper care. After the age of six or seven, cure without operation is very rare.

Atypical Appendicitis.

Cushing (*Annais of Gynæcology and Pediatry*, April 1, '04) says that many cases are met in which the diagnosis is not certain enough to warrant operation or the symptoms so mild as to delude the physician with the false hope that the attack is not very dangerous. Especially in women are these obscure cases found, where the possibility of disease of the uterine appendages has always to be considered. Hence it is well to examine the appendix in all obscure operative cases, removing it when at all elongated, thickened, hardened or adherent. Other cases are not infrequent in which a real necrotic appendicitis with perforation and suppuration occurs, but owing to want of diagnosis, mildness of the symptoms, unwillingness of the patient or hesitation of the physician, no operation is performed in the early stages. In such cases, spontaneous cure may occur

through absorption of the inflammatory products or their evacuation in the intestinal canal, or a circumscribed abscess may develop. Too often the pus burrows, general infection occurs and the patient dies of sepsis, even though operated upon. Many of these cases are mistaken for typhoid or malaria, or in women for pelvic inflammation or pelvic abscess. After citing illustrative cases, he concludes as follows:

That many cases of obscure abdominal affections are due to appendicitis, although the symptoms are not sufficiently clear to make a diagnosis.

That the appendix should be examined in most operations for pelvic disease.

That operation is indicated in all cases of appendicitis where there is at any time a decided elevation of temperature.

That the median incision is preferable in old and complicated or doubtful cases, particularly in women.

Perforation of the Uterus While Curetting.

A. Lapthorn Smith, of Montreal (*Am. Journal of Surgery and Gynæcology*), holds that the curette is used too often and too carelessly and frequently does more harm than good. It should be employed only with great prudence, under the strictest aseptic precautions.

Even in the best hands the curette is a dangerous instrument, although he believes the dilator more often leads to perforation than the curette, by tearing the uterine muscular fibres apart as the ends are separated.

The accident is especially likely to happen after confinement or abortion, while the uterus is going through the process of involution or fatty degeneration of its muscle.

He reports six cases of his own in which, owing to an aseptic field no complications ensued and several consultation cases of which the outcome was not so fortunate.

When perforation has taken place, care should be observed not to inject bichloride solution or iodine into the abdominal cavity or to pack gauze through the rent in the uterine wall.

Primary Chancre of Conjunctiva Followed Ten Years Later by an Interstitial Keratitis of the Same Eye.

Marlow, N. Y. (*Ophthalmic Record*, March, 1904), reports a case of this interesting condition. Patient, woman, aged 54, was taking care of an infant known to be the subject of inherited syhpilis.

Examination revealed a characteristic chancre in lower conjunctival retro-tarsal fold of right eye. Pre-auricular and submaxillary glands enlarged. The usual treatment was prescribed. Nothing more was seen or heard of her for ten years when she presented herself on account of an inflammation of the right eye. Examination revealed a typical interstitial keratitis, the whole cornea being occupied by a diffuse patchy haze. The upper fifth exhibited the characteristic salmon patch of Hutchinson. The left eye was unaffected.

The scar of the chancre was plainly visible in the conjunctiva.

"Pink Eye."

D. Kerfoot Shute, Washington (*Journal of Eye, Ear, Nose and Throat Diseases*) takes occasion to warn the general practitioner that he must use unusual care in his treatment of so-called "pink-eye." Pupillary conditions, he says, are the important thing to note, and he believes that if this is done there will be fewer cases in which boracic acid lotion is used for conjunctivitis, boracic acid or zinc solutions for iritis, or,

worse still, atropine for glaucoma. The general practitioner should bear in mind the fact that the pupil is large and extremely mobile in children and young adults, while it is small and comparatively rigid in old people. For this reason, a dilated pupil and redness of the eye in elderly patients should suggest the possibility of glaucoma being present, and atropine should be left alone in the treatment. On the other hand, a contracted pupil which responds slowly to light and shade, and associated with a red eye, when the patient is under forty, suggests the probability of iritis, where the administration of atropine is of prime importance. When the eye is red and the pupil is but moderately contracted, or not at all, and when the pupil responds readily to light and shade, conjunctivitis is to be thought of; this requires some astringent application, laying aside the boracic acid solution, which is practically valueless. Iritis in elderly people may be mistaken for conjunctivitis, but lachrymation in the former case and the gumming of the lids in the latter should enable the general practitioner to distinguish between them, when in doubt.

Dr. E. L. Shurly, of Detroit, made his debut as a play writer in May, when his comic opera, "The Merry Grafters," was presented in Detroit by a cast partly professional and partly amateur. Although not a financial success, the presentation demonstrated the doctor's versatility in a very satisfactory manner.

At the meeting of the A. M. A. in Atlantic City this month Dr. Edward F. Wells, of Chicago, brought forward for consideration the communicability of pneumonia. He regards this as a grave danger to civilization and urges greater care in treatment of patients who are suffering from the malady. Others spoke along the same lines.

BOOK REVIEWS

System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis Cohen, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, Etc., Etc. Vols. VII-X. Profusely Illustrated. Price, per volume, $2.00. P. Blakiston's Son & Co., Publishers, 1012 Walnut street, Philadelphia, Pa.

Under the general head of Mechanotherapy, a vast ground is covered in Vol. VII of this practical series. Students of massage in its relation to the rational cure of certain conditions will find a veritable mine of information on their pet subject, and those of us who have patients for whose benefit we are required to prescribe regular and interesting exercises may derive much that is extremely useful from the section of the book devoted to the general subject of exercise in sickness and in health. Dr. John K. Mitchell, of Philadelphia, is a generous contributor to this volume, and he gives his readers the benefit of a wide and long experience.

The subject of orthopedic surgery comes in for its share of attention, and it is capably treated, both textually and pictorially. The illustrations serve to assist the text to a marked degree, and in themselves contain many a useful hint as to technique and after-treatment.

Physical methods in ophthalmic therapeutics form the basis of an able exposition of this subject, which is of greater importance than is often accorded it by general writers and practitioners. Like the other portions of this volume, it is well and profusely illustrated.

Part I of Vol. VIII is devoted to the general subject of rest in the treatment

of certain conditions. The handling of this topic is logical, clear and convincing, and the practitioner who is struggling with a stubborn case of neurasthenia or with a patient suffering from a condition of hysteria that is aggravating alike to herself and her physician may find many useful suggestions upon which to work.

Quite in line with this matter are the chapters on the therapeutics of mental diseases, and, directly following these, the exposition of the value of suggestion in certain mental conditions.

Vol IX is devoted to hydrotherapy, thermotherapy and phototherapy, the text of which was written by Prof. Dr. Wilhelm Winternitz, of Kaltenleutgeben, assisted by Prof. Dr. Alois Strasser and Dr. B. Buxbaum, of Vienna. The translation into English has been made by Dr. Augustus A. Eshner, of Philadelphia, who has put the subject matter into easy shape for our assimilation. Dr. Winternitz is a recognized authority, and his work as director of the general polyclinic in Vienna has given him an enviable experience; his work is done with German thoroughness, and it has afterwards been cleverly adapted to American usage, so far as that may be said to exist in connection with treatments of this kind. The text is abundantly illustrated.

Vol. X deals with pneumotherapy, including aerotherapy and inhalation methods and therapy. The chief writer of the text is Dr. Louis Paul Tissier, chief of clinic in the faculty of medicine of the University of Paris, who has treated a broad subject broadly, and yet with sufficiency of detail to make its several points practical to a close reader. A number of illustrations, showing the more prominent and useful forms of the almost unlimited apparatus used in this work, are published, which aid in making the meaning clear.

Manual of Materia Medica and Pharmacy, Specially Designed for the use of Practitioners and Medical, Pharmaceutical, Dental and Veterinary Students. By E. Stanton Muir, Ph. G., V. M. D., Instructor in Comparative Materia and Pharmacy in the University of Pennsylvania. Third Edition, Revised and Enlarged. Crown Octavo, 192 Pages, Interleaved Throughout. Bound in Extra Cloth, $2.00, Net. F. A. Davis Co., Publishers, 1914-1916 Cherry St., Philadelphia, Pa.

With each succeeding edition this work of Muir's has been made more practical and every-day, and in the present form many of the new and some of the old drugs and pharmaceutical preparations have been omitted by design, the aim being to present only such such materials for study as are of everyday use and of recognized therapeutic value.

The work is divided into three parts, the first of which contains some brief general considerations and the divisions of materia medica, together with helpful definitions of the various forms of the vegetable world, and with these some concise definitions of the names of therapeutic actions. Part II takes up the consideration of the individual drugs, giving pharmaceutical name, common name, natural order, habitat, preparation, description, active principle, therapeutic action, dosage and such other information as is considered necessary for an accurate recognition.

The third part is especially practical and well written. It concerns itself with processes of mechanical subdivision, the pharmo-chemical processes, and much more that should be of infinite help to the manufacturing pharmacist or to the dispenser of drugs. The classes of official preparations are listed, as well as the individual official preparations, and there is

a valuable list of the incompatibles. It is a closely written and useful work, and should find favor with those to whom it is addressed. The system of interleaving is an excellent one for the serious student.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl von Noorden, Physician-in-Chief to the City Hospital, Frankfort a. M. Authorized American Edition Translated under the Direction of Boardman Reed, M. D., Professor of Diseases of the Gastro-Intestinal Tract, Hygiene and Climatology, Department of Medicine, Temple College; Physician to the Samaritan Hospital, Philadelphia, Etc. Part V. Concerning the Effect of Saline Waters (Kissingen, Homburg) on Metabolism. By Prof. Dr. Carl von Noorden, Frankfort, and Dr. Carl Dapper, Bad Kissingen. Price, Cloth, 75c. E. B. Treat & Co., Publishers, New York.

Von Noorden's monographs on diseases of metabolism and nutrition have already attracted wide notice through their scholarly treatment of a subject that perforce engages the attention of many a practitioner. The present little book is based on a second edition of a thesis of Dr. Dapper, published from von Noorden's clinic of 1896. Since that time, both men have been conducting exhaustive experiments on the abundance of material they have had at hand, and the results are remarkably exact and interesting. Their conclusions are reached at first hand, so to speak, from patients actually undergoing treatment, and they are therefore of the greatest clinical value. A number of old theories as to the incompatibility of the alkaline waters with fruit or the fats as articles of diet are overturned, and new and reasonable ones established.

The deductions to be made from a series of experiments carried out under the most favorable conditions and with the most painstaking care that can be bestowed by a German investigator are generally to be relied upon; and in the case of the present little book, von Noorden has again furnished us with a valuable addition to our treatment for the conditions he so ably discusses. Dr. Alfred C. Croftan, of Chicago, is the translator.

Elaborate plans have been formed by the Illinois Medical Society to demonstrate that the climate of their state is well adapted for the open-air treatment of pulmonary tuberculosis. With this end in view, a committee of the society has established a colony at Ottawa, Ill., where the experiments will be carried on. A tract of land, twenty-five acres in extent, has been secured and the first work will be done with about thirty patients, although this number will be increased as soon as possible. The tent plan is to be tried, and the physicians in charge of the plan are sanguine of its success. Cases in the early stages of the malady will be the subjects of the experiment.

State Health Commissioner Lewis's report to the governor of New York state, recently made public, shows that in the course of the year 1903, deaths to the number of 18,992 resulted from five of the preventable diseases. Commissioner Lewis took occasion to call attention to the fact that at Ithaca, with a population of 13,000, there were at one time 500 cases, with 50 deaths. He deplores the absurdly small appropriations which hampered the authorities in carrying out their work.

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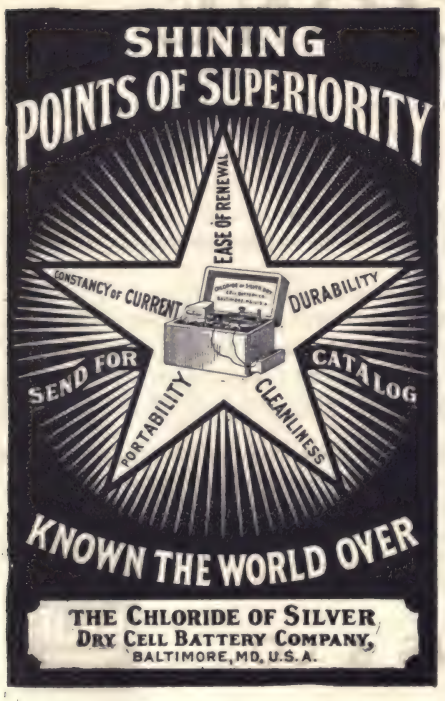

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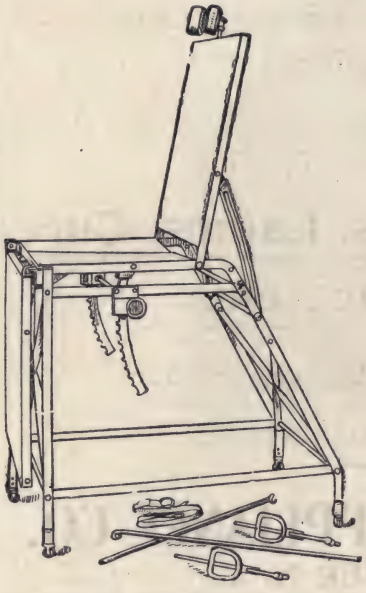

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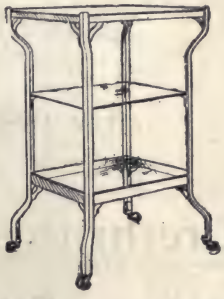

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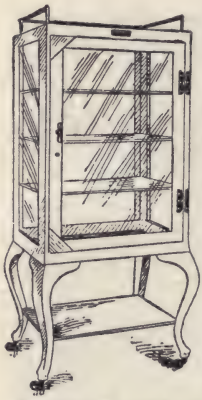

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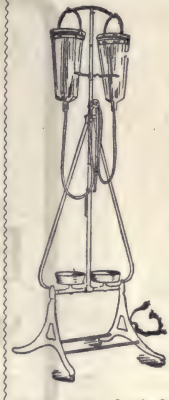

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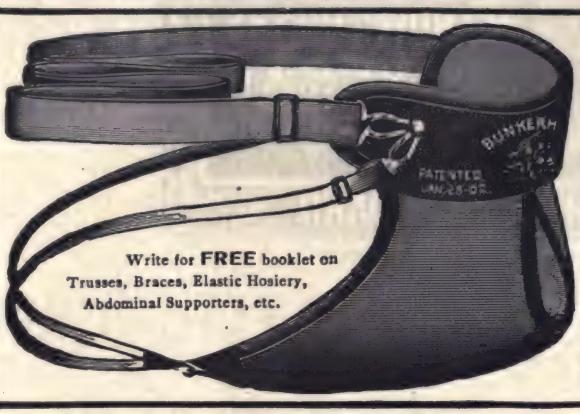

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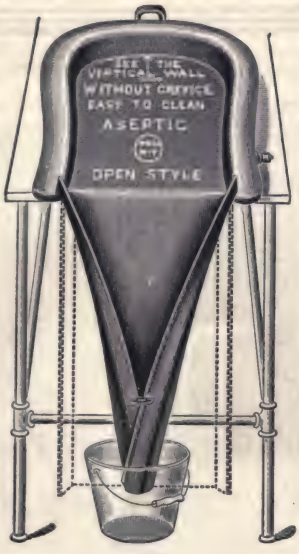

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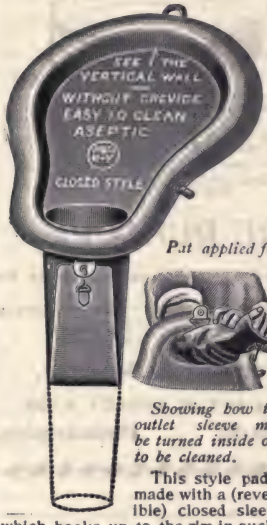

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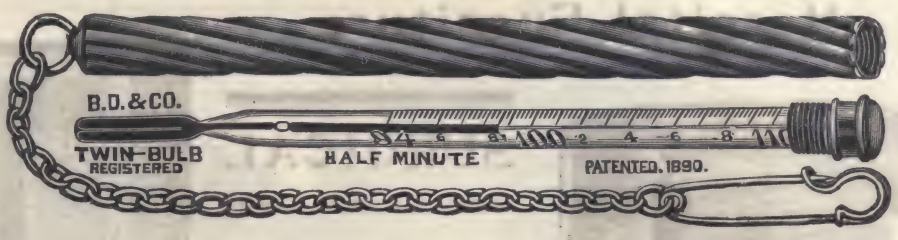

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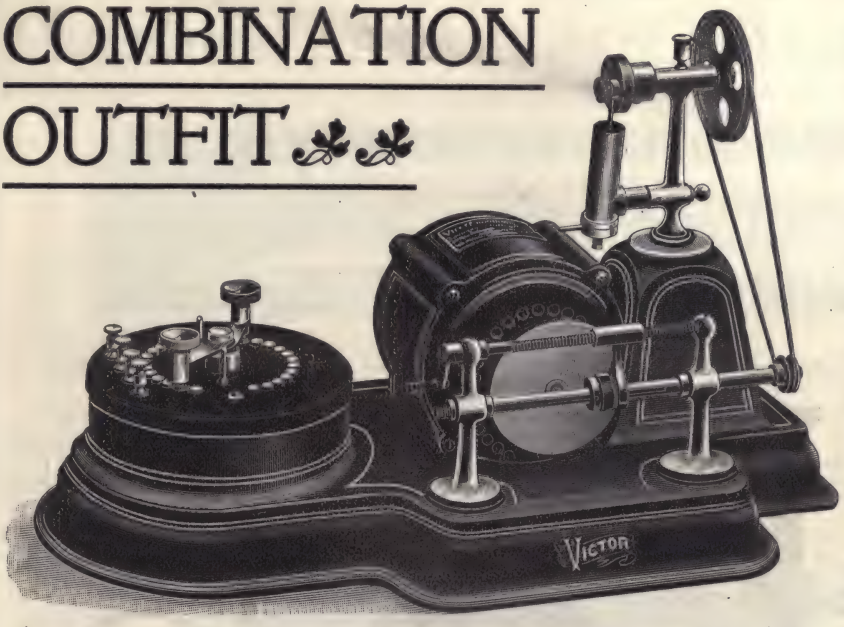

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